```
RRRRRRRRRRRR     UUU         UUU  NNN         NNN     OOOOOOOOO     FFFFFFFFFFFFFFF  FFFFFFFFFFFFFFF
RRRRRRRRRRRR     UUU         UUU  NNN         NNN     OOOOOOOOO     FFFFFFFFFFFFFFF  FFFFFFFFFFFFFFF
RRRRRRRRRRRR     UUU         UUU  NNN         NNN     OOOOOOOOO     FFFFFFFFFFFFFFF  FFFFFFFFFFFFFFF
RRR         RRR  UUU         UUU  NNN         NNN  OOO         OOO  FFF              FFF
RRR         RRR  UUU         UUU  NNN         NNN  OOO         OOO  FFF              FFF
RRR         RRR  UUU         UUU  NNN         NNN  OOO         OOO  FFF              FFF
RRR         RRR  UUU         UUU  NNNNNN      NNN  OOO         OOO  FFF              FFF
RRR         RRR  UUU         UUU  NNNNNN      NNN  OOO         OOO  FFF              FFF
RRR         RRR  UUU         UUU  NNNNNN      NNN  OOO         OOO  FFF              FFF
RRRRRRRRRRRR     UUU         UUU  NNN   NNN   NNN  OOO         OOO  FFFFFFFFFFFF     FFFFFFFFFFFF
RRRRRRRRRRRR     UUU         UUU  NNN   NNN   NNN  OOO         OOO  FFFFFFFFFFFF     FFFFFFFFFFFF
RRRRRRRRRRRR     UUU         UUU  NNN   NNN   NNN  OOO         OOO  FFFFFFFFFFFF     FFFFFFFFFFFF
RRR   RRR        UUU         UUU  NNN      NNNNNN  OOO         OOO  FFF              FFF
RRR   RRR        UUU         UUU  NNN      NNNNNN  OOO         OOO  FFF              FFF
RRR   RRR        UUU         UUU  NNN      NNNNNN  OOO         OOO  FFF              FFF
RRR      RRR     UUU         UUU  NNN         NNN  OOO         OOO  FFF              FFF
RRR      RRR     UUU         UUU  NNN         NNN  OOO         OOO  FFF              FFF
RRR      RRR     UUU         UUU  NNN         NNN  OOO         OOO  FFF              FFF
RRR         RRR  UUUUUUUUUUUUUUU  NNN         NNN     OOOOOOOOO     FFF              FFF
RRR         RRR  UUUUUUUUUUUUUUU  NNN         NNN     OOOOOOOOO     FFF              FFF
RRR         RRR  UUUUUUUUUUUUUUU  NNN         NNN     OOOOOOOOO     FFF              FFF
```

```
_$2

Sym
---
NDX
NDX
NUM
NUM
OPE
OUT
PAC
PAC
PAC
PAC
PAC
PAC
PAC
PAD
PAG
PAG
PAG
PAG
PAG
PAG
PAG
PER
PUT
RCO
RIN

RLI
RNO
RNO
RTY
SAV
STR
STR
STR
STR
STR
STR

 STR
 STR
 STR
 STR
 STR
 STR
 STR
 STR
 STR
 STR
 STR
 STR
 STR
 STR
```

```
**FILE**ID**GSLU                                   K  8



  GGGGGGGG    SSSSSSSS  LL          UU      UU
  GGGGGGGG    SSSSSSSS  LL          UU      UU
GG          SS          LL          UU      UU
GG          SS          LL          UU      UU
GG          SS          LL          UU      UU
GG          SS          LL          UU      UU
GG            SSSSSS    LL          UU      UU
GG            SSSSSS    LL          UU      UU
GG  GGGGGG          SS  LL          UU      UU
GG  GGGGGG          SS  LL          UU      UU
GG      GG          SS  LL          UU      UU      ....
GG      GG          SS  LL          UU      UU      ....
  GGGGGG    SSSSSSSS    LLLLLLLLLL  UUUUUUUUUU      ....
  GGGGGG    SSSSSSSS    LLLLLLLLLL  UUUUUUUUUU      ....


LL            IIIIII      SSSSSSSS
LL            IIIIII      SSSSSSSS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II        SSSSSS
LL              II        SSSSSS
LL              II              SS
LL              II              SS
LL              II              SS
LL              II              SS
LLLLLLLLLL    IIIIII    SSSSSSSS
LLLLLLLLLL    IIIIII    SSSSSSSS
```

```
GTA
VO4
```

```
  0001  0 MODULE gslu (   IDENT = 'V04-000'
P 0002  0                 %BLISS32[, ADDRESSING_MODE (EXTERNAL      = LONG_RELATIVE,
  0003  0                                             NONEXTERNAL = LONG_RELATIVE)]
  0004  0                 ) =
  0005  1 BEGIN
  0006  1 !
  0007  1 !****************************************************************************
  0008  1 !*                                                                          *
  0009  1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                 *
  0010  1 !*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.                  *
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  0015  1 !*  INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR  ANY  OTHER   *
  0016  1 !*  COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY   *
  0017  1 !*  OTHER PERSON.  NO TITLE TO AND OWNERSHIP OF  THE  SOFTWARE IS  HEREBY   *
  0018  1 !*  TRANSFERRED.                                                            *
  0019  1 !*                                                                          *
  0020  1 !*  THE INFORMATION IN THIS SOFTWARE IS  SUBJECT TO CHANGE WITHOUT NOTICE   *
  0021  1 !*  AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT   *
  0022  1 !*  CORPORATION.                                                            *
  0023  1 !*                                                                          *
  0024  1 !*  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE  OR  RELIABILITY OF ITS   *
  0025  1 !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                 *
  0026  1 !*                                                                          *
  0027  1 !*                                                                          *
  0028  1 !****************************************************************************
  0029  1 !
  0030  1 !++
  0031  1 ! FACILITY:     DSR (Digital Standard RUNOFF) / DSRPLUS
  0032  1 !
  0033  1 ! ABSTRACT:
  0034  1 !
  0035  1 !       Collect an unbroken sequence of letters, converting
  0036  1 !       all letters to uppercase.
  0037  1 !
  0038  1 ! ENVIRONMENT:  Transportable
  0039  1 !
  0040  1 ! AUTHOR:       R.W.Friday        CREATION DATE: April, 1978
  0041  1 !
  0042  1
```

```
;     44        0043  1 %SBTTL 'Revision History'
;     45        0044  1 !
;     46        0045  1 ! MODIFIED BY:
;     47        0046  1 !
;     48        0047  1 !        002     RER00002        Ron Randall     07-Mar-1983
;     49        0048  1 !                Global edit of all modules. Updated module names, idents,
;     50        0049  1 !                copyright dates. Changed require files to BLISS library.
;     51        0050  1 !
;     52        0051  1 !--
;     53        0052  1
;    55         0053  1 %SBTTL 'Module Level Declarations'
;    56         0054  1
;    57         0055  1 !
;    58         0056  1 ! TABLE OF CONTENTS:
;    59         0057  1 !
;    60         0058  1 ! INCLUDE FILES:
;    61         0059  1 !
;    62         0060  1 LIBRARY 'NXPORT:XPORT';                                 ! XPORT Library
;    63         0061  1 REQUIRE 'REQ:RNODEF';                                   ! RUNOFF variant definitions
;    64         0192  1
;    65       U 0193  1 %IF DSRPLUS %THEN
;    66       U 0194  1 LIBRARY 'REQ:DPLLIB';                                   ! DSRPLUS BLISS Library
;    67         0195  1 %ELSE
;    68         0196  1 LIBRARY 'REQ:DSRLIB';                                   ! DSR BLISS Library
;    69         0197  1 %FI
;    70         0198  1
;    71         0199  1 !
;    72         0200  1 ! EXTERNAL REFERENCES:
;    73         0201  1 !
;    74         0202  1 EXTERNAL
;    75         0203  1     KHAR;
;    76         0204  1
```

```
  1 GLOBAL ROUTINE GSLU (INPUT_STRING, OUTPUT_STRING) =
  1
  1 !++
  1 ! FUNCTIONAL DESCRIPTION:
  1 !
  1 !       GSLU processes an unbroken sequence of letters,
  1 ! stopping when 1) a non-letter is found, or
  1 !               2) the end of IRA is reached, or
  1 !               3) OUTPUT_STRING is about to overflow.
  1 ! All letters encountered are transferred to OUTPUT_STRING
  1 ! after being first converted to upper case.
  1 !
  1 ! FORMAL PARAMETERS:
  1 !
  1 !       INPUT_STRING is the string to be scanned.
  1 !       The collected string of letters is left in OUTPUT_STRING.
  1 !
  1 ! IMPLICIT INPUTS:      None
  1 !
  1 ! IMPLICIT OUTPUTS:     None
  1 !
  1 ! ROUTINE VALUE:
  1 ! COMPLETION CODES:
  1 !
  1 !       See GSLUCC.REQ for completion codes returned.
  1 !
  1 ! SIDE EFFECTS:         None
  1 !--
  1
  2     BEGIN
  2     MAP
  2         OUTPUT_STRING : REF FIXED_STRING;
  2     BIND
  2         IRA = INPUT_STRING : REF FIXED_STRING;
  2
  2     WHILE 1 DO
  3         BEGIN
  3
  3                                                 !Stop on a nonletter.
  4         IF  NOT LETTER (.KHAR)
  3         THEN
  4             RETURN (IF .FS_LENGTH (OUTPUT_STRING) EQL 0
  3                 THEN GSLU_NONE ELSE GSLU_NORMAL);
  3
  3         IF  .FS_LENGTH (OUTPUT_STRING) EQL .FS_MAXSIZE (OUTPUT_STRING)
  3         THEN
  3             (WHILE LETTER (.KHAR) DO (KCNS ()); RETURN GSLU_TOO_LONG);  !Throw away excess letters.
  3
P 3         FS_WCHAR (OUTPUT_STRING,                        !Convert to upper case and output the letter.
P 3             (IF  UPPER_LETTER (.KHAR)
P 3              THEN
  3                 .KHAR ELSE UPPER_CASE (.KHAR)));
  4         KCNS ()                                         !Get next character.
  3         END                                             !end of processing loop.
  3
  1     END;                                                !End of GSLU
```

```
                                                      .TITLE  GSLU
                                                      .IDENT  \V04-000\

                                                      .EXTRN  KHAR, RINTES

                                                      .PSECT  $CODE$,NOWRT,2

                                01FC 00000            .ENTRY  GSLU, Save R2,R3,R4,R5,R6,R7,R8           ; 0205
           58 00000000G  EF       9E 00002            MOVAB   KHAR, R8                                  ;
           54        08  AC       D0 00009            MOVL    OUTPUT_STRING, R4                         ; 0249
           57        08  AC       D0 0000D            MOVL    OUTPUT_STRING, R7                         ;
           52        08  AC       D0 00011            MOVL    OUTPUT_STRING, R2                         ; 0256
           55        04  AC       D0 00015            MOVL    IRA, R5                                   ; 0257
           56        0C  A5       9E 00019            MOVAB   12(R5), R6                                ;
           50            68       D0 0001D 1$:        MOVL    KHAR, R0                                  ; 0244
 00000041  8F            50       D1 00020            CMPL    R0, #65                                   ;
                         09       19 00027            BLSS    2$                                        ;
 0000005A  8F            50       D1 00029            CMPL    R0, #90                                   ;
                         23       15 00030            BLEQ    5$                                        ;
 00000061  8F            50       D1 00032 2$:        CMPL    R0, #97                                   ;
                         09       19 00039            BLSS    3$                                        ;
 0000007A  8F            50       D1 0003B            CMPL    R0, #122                                  ;
                         11       15 00042            BLEQ    5$                                        ;
           50        08  AC       D0 00044 3$:        MOVL    OUTPUT_STRING, R0                         ; 0246
                     0C  A0       D5 00048            TSTL    12(R0)                                    ;
                         04       12 0004B            BNEQ    4$                                        ;
           50            02       D0 0004D            MOVL    #2, R0                                    ;
                                  04 00050            RET                                               ;
           50            01       D0 00051 4$:        MOVL    #1, R0                                    ;
                                  04 00054            RET                                               ;
        08 A7        0C  A4       D1 00055 5$:        CMPL    12(R4), 8(R7)                             ; 0249
                         4B       12 0005A            BNEQ    11$                                       ;
           50        04  AC       D0 0005C            MOVL    IRA, R0                                   ; 0251
           53        0C  A0       9E 00060            MOVAB   12(R0), R3                                ;
           51            68       D0 00064 6$:        MOVL    KHAR, R1                                  ;
 00000041  8F            51       D1 00067            CMPL    R1, #65                                   ;
                         09       19 0006E            BLSS    7$                                        ;
 0000005A  8F            51       D1 00070            CMPL    R1, #90                                   ;
                         12       15 00077            BLEQ    8$                                        ;
 00000061  8F            51       D1 00079 7$:        CMPL    R1, #97                                   ;
                         21       19 00080            BLSS    10$                                       ;
 0000007A  8F            51       D1 00082            CMPL    R1, #122                                  ;
                         18       14 00089            BGTR    10$                                       ;
                         63       D5 0008B 8$:        TSTL    (R3)                                      ;
                         09       14 0008D            BGTR    9$                                        ;
           68       00G  8F       9A 0008F            MOVZBL  #RINTES, KHAR                             ;
           63            01       CE 00093            MNEGL   #1, (R3)                                  ;
                         CC       11 00096            BRB     6$                                        ;
           68        04  B0       9A 00098 9$:        MOVZBL  @4(R0), KHAR                              ;
                     04  A0       D6 0009C            INCL    4(R0)                                     ;
                         63       D7 0009F            DECL    (R3)                                      ;
                         C1       11 000A1            BRB     6$                                        ;
           50            03       D0 000A3 10$:       MOVL    #3, R0                                    ;
                                  04 000A6            RET                                               ;
           50            68       D0 000A7 11$:       MOVL    KHAR, R0                                  ; 0256
 00000041  8F            50       D1 000AA            CMPL    R0, #65                                   ;
```

```
                                                     09  19 000B1         BLSS    12$                                         ;
                            0000005A   8F            50  D1 000B3         CMPL    R0, #90                                     ;
                                                     03  15 000BA         BLEQ    13$                                         ;
                                       50            20  C2 000BC 12$:    SUBL2   #32, R0                                     ;
                                  04   B2            50  90 000BF 13$:    MOVB    R0, @4(R2)                                  ;
                                                04   A2  D6 000C3         INCL    4(R2)                                       ;
                                                0C   A4  D6 000C6         INCL    12(R4)                                      ;
                                                     66  D5 000C9         TSTL    (R6)                                        ; 0257
                                                     09  14 000CB         BGTR    14$                                         ;
                                       68       00G  8F  9A 000CD         MOVZBL  #RINTES, KHAR                               ;
                                       66            01  CE 000D1         MNEGL   #1, (R6)                                    ;
                                                     09  11 000D4         BRB     15$                                         ;
                                       68       04   B5  9A 000D6 14$:    MOVZBL  @4(R5), KHAR                                ;
                                                04   A5  D6 000DA         INCL    4(R5)                                       ;
                                                     66  D7 000DD         DECL    (R6)                                        ;
                                                   FF3B  31 000DF 15$:    BRW     1$                                          ;

; Routine Size:  226 bytes,    Routine Base:  $CODE$ + 0000


;  134          0261  1
;  135          0262  1 END                                                !End of module
;  136          0263  0 ELUDOM




;                                        PSECT SUMMARY
;
;       Name                        Bytes                         Attributes
;
;  $CODE$                                226  NOVEC,NOWRT,  RD ,  EXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)




;                                Library Statistics
;
;                                            -------- Symbols --------           Pages         Processing
;       File                                 Total    Loaded    Percent          Mapped        Time
;
;  _$255$DUA28:[SYSLIB]XPORT.L32;1             590         0          0           252           00:00.1
;  _$255$DUA28:[RUNOFF.SRC]DSRLIB.L32;1       1248        17          1            86           00:00.3





;                                       COMMAND QUALIFIERS

;       BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS$:GSLU/OBJ=OBJ$:GSLU MSRC$:GSLU/UPDATE=(ENH$:GSLU)

; Size:         226 code + 0 data bytes
; Run Time:          00:04.7
; Elapsed Time:      00:14.0
; Lines/CPU Min:      3386
; Lexemes/CPU-Min:   15733
; Memory Used:   70 pages
; Compilation Complete
```

0342 AH-BT13A-SE
VAX/VMS V4.0

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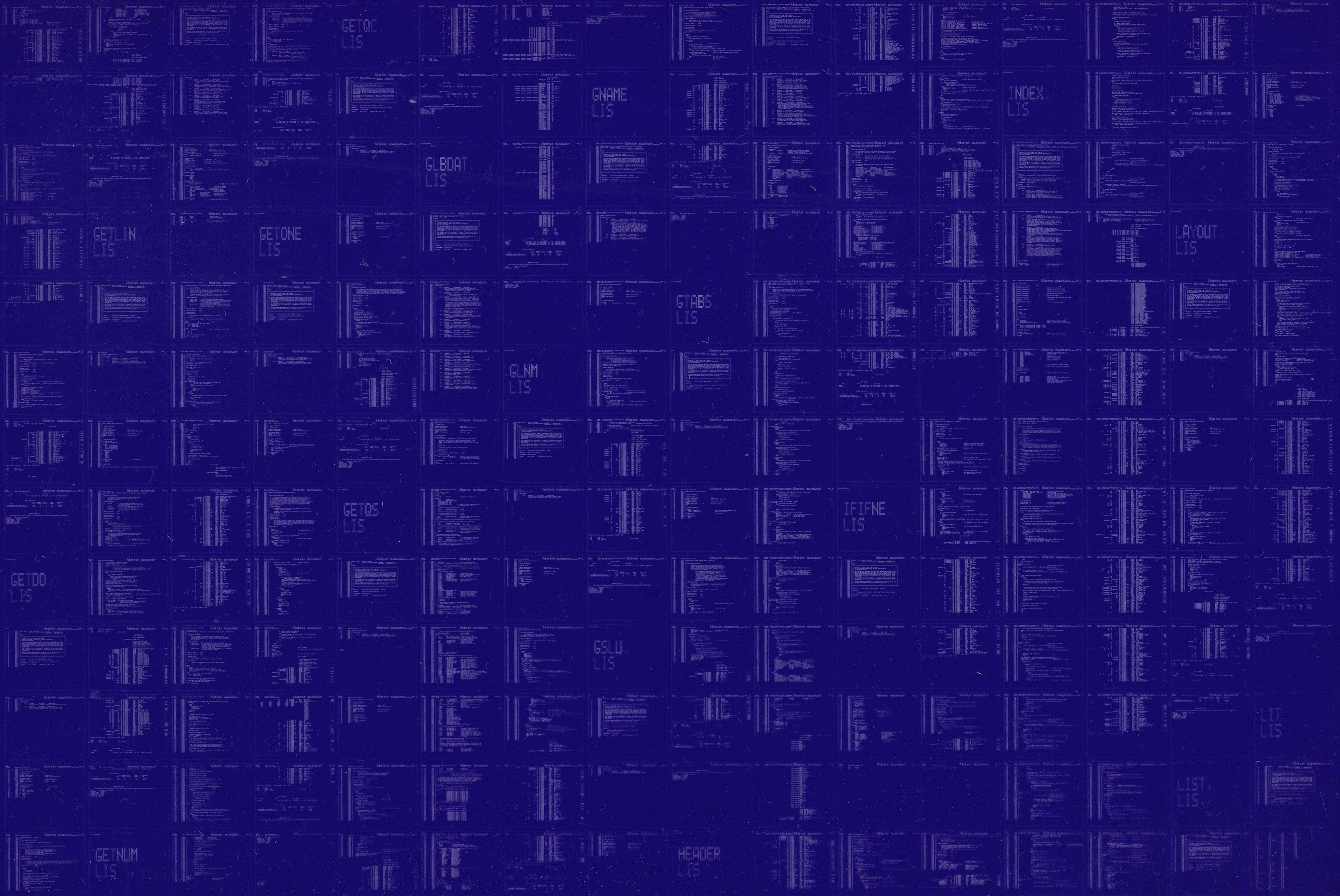

GETQC
LIS

GNAME
LIS

INDEX
LIS

GLBDAT
LIS

GETLIN
LIS

GETONE
LIS

LAYOUT
LIS

GTABS
LIS

GLNM
LIS

GETQS
LIS

IFIFNE
LIS

GETDD
LIS

GSLU
LIS

LIT
LIS

LIST
LIS

GETNUM
LIS

HEADER
LIS